

Observations on Hawaiian Panicum and Sapindus
Hawaiian Plant Studies 61

Harold St. John
Bishop Museum, Honolulu, Hawaii 96818

Gramineae

Panicum conjugens Skotts. b., Göteborg. Bot. Trädg.,
Meddel. 15: 298, figs. 106, 125-135, 1944.

Lectotype: Hawaiian Islands, Kauai Island,
Alakai, bog along trail from Lehua makanoe toward
Kilohana, 13/8/1938, O. H. Selling 2,886 (BISH),
here designated.

The species was based on three collections,
without a positive designation of a holotype.
One specimen was mentioned as a smaller form,
a second one was said to be possibly the same.
The third, Selling 2,886, agrees with the
diagnosis, so it is here chosen as lectotype.

Panicum gracilius (Skotts. b.) comb. nov.

P. hillebrandianum Hitchc., var. *gracilius*
Skotts. b., Göteborg. Bot. Trädg., Meddel. 15:
296, figs. 118-124, 1944.

P. hillebrandianum is native to the bogs of
west Maui. It has the spikelets 2.7-3.3 mm long;
first glume 0.8-2.1 mm long; second glume 2.5-3.3
mm long; sterile lemma 2.5-3 mm long; and the
sterile palea 1.1-1.5 mm long. *P. gracilius* of
the Alakai bogs, Kauai, has the spikelets 2.3-2.8
mm long; first glume 1-1.7 mm long; second glume
2.4-2.6 mm long; sterile lemma 2.3-2.5 mm long;
and the sterile palea 1.5-1.6 mm long.

It seems to be a clearly distinct species.

Sapindaceae

Sapindus Thurstonii Rock, Hawaii Board Agric. &
For., Bull. 1: 6, fig. 2, pl. 3, 1911; Fedde,
Repert. 10: 368, 1912.

S. saponaria L., var. *Thurstonii* (Rock) Skotts. b.,
Göteborg. Bot. Trädg., Meddel. 2: 244, 1926.

S. saponaria L., forma *inaequalis* sensu Radlk.,
as to Hawaiian tree, Engler's Pflanzenreich
IV, 165(3): 646, 650, 1932; Fagerlund &
Mitchell, Hawaii Natl. Park, Nat. Hist. Bull.

9: 45, 1944; St. John, Pacif. Trop. Bot. Gard., Mem. 1: 225, 1973; non (DC.) Radlk., in Engler's Pflanzenreich IV, 165(3): 646, 1932.

S. Saponaria L., forma microcarpus sensu Radlk. as to Hawaiian tree, Engler's Pflanzenreich IV, 165(3): 646, 651, 1932, non (Jardin) Radlk., l. c. 646, 1932.

S. Saponaria, as to Hawaiian tree, Rock, Ind. Trees Hawaii, 271-273, pl. 104-106, 1913; Degener, Ferns Fl. Pl. Hawaii Natl. Park 202, 204, pl. 55, (1930); Lamoureux, Trailside Pl. Hawaii Natl. Park, 47, color fig., (1977); non L., Sp. Pl. 367, 1753.

The Hawaiian native Sapindus tree, called "mānele" or "a'e," occurring on Hawaii and Maui, in botanical classification has fluctuated from species, to forma, to variety, to a synonym of the tropical American S. Saponaria, or to two of its formae. J. F. Rock first described it in 1911 as a new species, S. Thurstonii, but in 1913, after reexamination of the material, he reduced it and made it a synonym of the American S. Saponaria. The monographer Radlkofer placed it in two of his formae under S. Saponaria. Skottsberg in 1926, on review of the problem, noted that the Hawaiian trees had leaves with a narrower leaf rachis and smaller fruit. He then published it as S. Saponaria L., var Thurstonii (Rock) Skottsberg.

During several visits to large herbaria, the writer has studied extensive collections of the tropical American S. Saponaria L. He found that it had the petioles winged or wingless; rachis winged; leaflets (6) 8-14; sepals glabrous without, or sparsely remotely puberulent at base, but the margins ciliate; petals with a 1 mm claw, white pilose, the limb 1.3-1.5 mm long, broadly elliptic, minutely ciliate, but otherwise glabrous; filaments to 3 mm in length, the lower 2/3 villous. The Hawaiian S. Thurstonii has the petioles wingless; rachis wingless; leaflets 6-10 (-12); sepals densely pilosulous without, except in the upper part covered in bud; the margins ciliate;

petals with a 0.7 mm pilose claw and a limb 2.8 mm long, 1.5 mm wide, elliptic, pilose within and without, except near the ciliate upper margin; filaments to 2.5 mm long, the lower 2/3 densely pilose.

In conclusion, the differences tabulate^d above seem adequate for the recognition of the Hawaiian trees as an endemic species, properly named Sapinus Thurstonii Rock.